EDEBOHLS (Geo M.)

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SUTURE IN PERINEORRHAPHY.

BY

GEORGE M. EDEBOHLS, M.D.,

Gynecologist to St. Francis Hospital, New York.

[Reprinted from the American Journal of Obstetrics and Diseases of Women and Children, Vol. XXIII. No. 10, 1890.]

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The operation of perineorrhaphy, resolved into its essential elements, consists of: 1st, the denudation; 2d, the suture.

Gynecologists seem at present to be as far as ever, if not further, from consensus as to what constitutes the best methods of both. Innumerable modifications have been proposed from time to time, many of them too fanciful and complicated to be readily practised—I had almost said understood—even by those who perform the operation frequently. The general practitioner, who operates but now and then, is completely bewildered and mystified. He may have operated but once after a certain method, when he reads of another procedure, practised and highly spoken of by some eminent gynecologist. Not quite satisfied, perhaps, with the result in his last case, he forthwith alters his technique in the next; this repeats itself again and again, with the result that he fails to attain proficiency with any particular method. He is a Jack of all techniques, but master of none.

In regard to the method of denudation, the flap-splitting principle appears to be steadily gaining in favor, and seems to have the fairest prospects of something like universal ac-

[1] Read before the Gynecological Section of the Tenth International Medical Congress.

ceptance. I myself have settled into the method of flap-splitting for complete lacerations through the sphincter and for incomplete lacerations without rectocele. When the last-named condition coexists with an incomplete laceration, I resort either to simple flap-splitting or to the following method: The incision is made as in flap-splitting, but is carried deeper and along close beneath the vaginal mucous membrane until the summit of the rectocele is reached. I then cut away the vaginal flap in such a way as to leave a denudation identical in shape with that produced in the ordinary flap-splitting incision when the flaps are pulled apart. In either case we have an elliptical, U-shaped denudation to deal with and to unite. The method of suture presently to be described does away with the rectocele at the same time that it closes the perineal wound, without the necessity of any special modification.

This method of perineal suture is a development or evolution resulting from the previous fairly extensive employment of other methods and observation of their shortcomings and defects. Previous to a description, therefore, of the method, I may be permitted to state briefly my criticisms upon, and objections to, the methods in common use.

The ideal suture must fulfil the following conditions:

1. It must appose the raw surface of one half of the wound accurately to that of the other half in all its parts, edges as well as the deeper tissues.

2. In thus apposing them, it must spread out the raw surfaces to their fullest extent, so as to secure a broad and, by virtue of its breadth, strong area of union.

3. It must be able to maintain a hold upon the tissues of either side, beyond the wound, sufficient to assure retention of the raw surfaces in coaptation until firm union has taken place.

The buried catgut suture, properly applied, fulfils the first and second indications, but fails to meet the third. While partial to, and successful in, its employment in other plastic operations where such strong tension of the tissues does not come into play—as in anterior colporrhaphy, and in posterior colporrhaphy without perineorrhaphy—I discarded it in perineorrhaphy after a number of trials. The perineum, it is true, at the conclusion of the operation looks shapely and

feels solid and firm, but one of two results is likely soon to happen. If the catgut has taken but a superficial hold upon the raw surfaces of either half of the wound, it is unable to withstand, without cutting, the strong tension of the deeper perineal structures. These are liable to tear away from it before firm union has occurred; whereas the tension of the skin not being so great, the latter generally heals satisfactorily. This gives us, with good union of the skin, an attenuated and yielding perineal body or shelf—a so-called "skin perineum."

Or, in attempting to secure a deeper and firmer hold with the catgut, we are liable to draw it too tightly, to strangulate the embraced tissues to a greater or less degree, and thus to interfere with good and firm union. At all events, in spite of considerable and varied experience in the employment of the buried catgut suture, in using it for perineorrhaphy I have failed to obtain the solid perinea which alone constitute a success.

Tait's method of suture, the buried silkworm-gut loop, meets the first indication fully—though often only with the added aid of superficial sutures—the second partially, and frequently fails to a greater or less extent in the third.

I have given it a trial in a sufficient number of cases to satisfy myself on these points. The experiences of other operators are to the same effect, especially in relation to the third indication, which they have endeavored to meet by carrying the sutures through the skin, very near to the edge of the wound, instead of entering on the raw surfaces just within the wound margin as practised by Tait.

In doing this they really perform the ordinary method of suture, which consists in entering and emerging upon the skin and vaginal mucous membrane. The increased security of the hold upon the tissues thus meets more fully the third indication. It sacrifices, however, to a greater extent the advantages of the first and second requirements, inasmuch as in tying the suture the skin is likely to be more or less infolded.

These three varieties—the buried catgut suture in tiers, the buried single loop of silkworm gut or other material, and the ordinary suture as generally applied to all cutaneous wounds—constitute our resources for securing apposition of the freshened surfaces in the performance of perineorrhaphy.

I will now endeavor to describe my method of performing perineorrhaphy—denudation and suture—and, in regard to the latter, attempt to point out why, in my opinion, it fulfils more fully the conditions, above indicated, of an ideal suture for closing the perineum.

Let us take a case of ordinary incomplete perineal laceration without rectocele. With sharp-pointed scissors curved on the flat, a U-shaped incision is made along the muco-cutaneous junction of the posterior commissure, the arms being extended forward to the posterior border of, or into the labia majora as far as considered desirable. The incision is deepened at its central part to half an inch *or more*, the depth gradually diminishing towards either extremity.

By drawing the anterior flap forward and the posterior

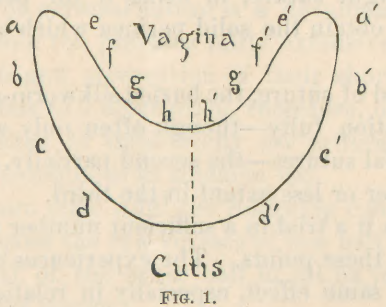

FIG. 1.

backward, a raw surface is formed of the shape delineated in Fig. 1. Let us now imagine this raw surface divided into two equal halves by an imaginary line running through its centre from symphysis pubis to anus. In suturing we oppose these two halves to each other, so that the points marked by corresponding letters, *a a'*, *b b'*, *c c'*, *d d'*, come together, and the wound is folded, as it were, raw surface inward, over the imaginary line.

Four sutures are generally required, the first suture uniting the apices of the wound, *a e* and *a' e'*, the second *b f* to *b' f'*, the third *c g* to *c' g'*, the fourth *d h* to *d' h'*. The sutures run parallel and are similar to each other, and a description of one will apply to all.

Each suture is passed as follows: A strong strand of silkworm gut is threaded upon a curved needle (I prefer a Hage-

dorn) of semicircular shape. The needle, securely held by a needle holder, penetrates the skin (1, Fig. 2) to the left of the wound, ¾ to 1 inch from the margin of the latter. It is carried in a semicircular sweep through all the intervening tissues into the vagina, where it emerges at a point (2) ¾ to 1 inch from the margin of the wound. It is carried on in the vagina, and again pierces the walls of the latter at a point (3) distant ¼ inch from the wound margin. It travels along beneath the mucous membrane, and emerges on the wound surface at 4, just beneath the edge of the mucous membrane. The needle is now carried across the vulvar orifice, and enters the wound of the right side beneath the cut edge of the mucous membrane at a point (5) corresponding to 4

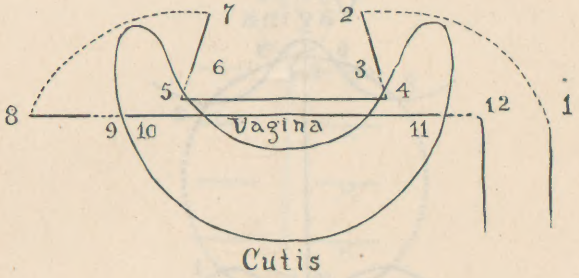

FIG. 2.

of the left side. It emerges upon the vaginal wall ¼ inch from the wound margin, re-enters the vaginal wall at 7, ½ to ¾ inch further on, again sweeps through all the tissues between vagina and skin, emerging upon the perineum ¾ to 1 inch from the margin of the cutaneous wound (8). After the four sutures have been passed thus far, the ends pendent at 8 are rethreaded upon a short, straight needle, carried through the skin at 9, ¼ inch distant from the wound margin, thence along just beneath the skin, emerging upon the wound at 10, just within the skin, re-entering the opposite surface at 11 and emerging upon the skin at 12.

After freeing the wound of clots and after a final thorough irrigation of the parts, the sutures are tied in succession, beginning with the lowest and proceeding upward. The two free ends at 1 and 12 are drawn upon until the embraced

parts of the wound are snugly approximated. They are then securely tied.

Fig. 3 represents a section through the plane, or along the course of a tied suture. It illustrates the hold of the suture upon the skin and vaginal mucous membrane, which prevents its cutting out readily, and its grasp upon the deep tissues of the perineum, drawing them toward the central line. It also demonstrates the manner in which the sutures spread out the raw surfaces to be united, puckering the vaginal mucous membrane inward between 3 and 6, and the cutaneous lips outward between 9 and 12, and nicely coaptating the margins of the wound all around.

A closer inspection of Fig. 3 shows that the suture is prac-

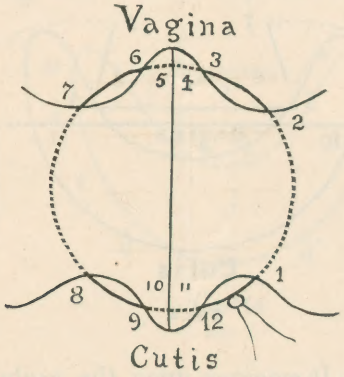

FIG. 3.

tically the equivalent of the buried loop of silkworm gut, with this exception: that for the purpose of securing a hold upon tissues which, on account of their greater firmness, are not so easily cut through, the vagina between 2 and 3, 6 and 7, and the skin between 8 and 9, 12 and 1, are included in the grasp of the suture.

When all the sutures have been tied, the perineum presents the appearance sketched in Fig. 4. This appearance is duplicated on the vaginal surface. The sutures cross the line of union subcutaneously and submucously. The lips of the wound are puckered in the form of a median raphe, which is preserved more or less after removal of the sutures. The knots are tied off to one side of the wound.

The perineum is covered with bichloride gauze, 1 : 2,000, and the patient put to bed. For the first two days the urine is drawn by the catheter; subsequently it is voided on the bedpan, an intravaginal antiseptic douche following and cleansing the parts. The sutures are removed on the ninth or tenth day.

Since December, 1889, I have operated after the above method in 10 cases of incomplete laceration, three of them being complicated with well-marked rectocele. In 9 of the 10 cases, one or more of the following operations were performed at the same time: Amputation of the cervix, trachelorrhaphy, anterior colporrhaphy, Alexander's operation. In all of them primary union was obtained, with good perineal

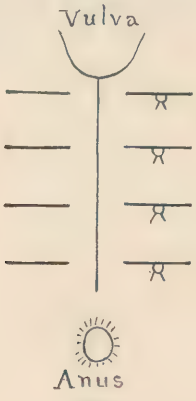

FIG. 4.

bodies, although in two cases stitch abscesses formed. These were evacuated by incisions made laterally quite away from, and not interfering with, the central line of union. Union in these cases was firm, and the result a good and strong though not so sightly a perineum as in the other cases.

I have thus far not had an opportunity to apply the method to a complete laceration into the rectum. When such a case presents, I shall split the septum and stitch together the free margins of the rectal flap with catgut. With this as a base I shall build up a perineum as far forward as may be desirable, proceeding in the same way as for incomplete laceration.

The advantages of the perineal suture above described, briefly recapitulated, are as follows:

It brings together the corresponding parts of each lateral half of the perineum which have been separated by the laceration.

It does not infold the margins of the cutaneous or vaginal wounds.

It spreads out to their fullest extent the raw surfaces to be united, thus securing the broadest possible area of union, and consequent strength and bulk of the new perineum.

It secures a reliable grasp upon the tissues and obviates the tendency of the sutures to cut out before firm union has taken place.

The suture, although apparently complicated and difficult to describe, becomes practically easy of application when the principle involved is thoroughly understood. It has yielded me results better by far than I have been able to obtain with other methods.